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(54) Title: STEM CELL EXPANSION FACTOR BLOCKING A GENE LIMITING HOX-INDUCED EXPANSION AND METHOD USING SUCH FACTOR

(57) Abstract: The present invention relates to a stem cell expansion factor comprising a blocker which reduces expression level of at least one gene normally limiting HOX-induced expansion of stem cells, whereby reducing expression level of said gene enhances expansion of stem cells containing a HOX peptide. The present invention also relates to a composition for enhancing expansion of stem cells comprising an amino acid sequence having the activity of a HOX peptide, wherein said peptide being able to cross a cell membrane, and a blocker which reduces expression level of at least one gene normally limiting HOX-induced expansion of stem cells, whereby reducing expression level of said gene in the presence of a HOX peptide enhances expansion of stem cells. The preferred HOX peptide is HOXB4 and the preferred gene is PBX.

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